

Claims

1. A stocker apparatus comprising:
 - a first tray stock section capable of stocking a plurality of empty trays;
 - a second tray stock section capable of stocking a plurality of loaded trays, the loaded trays being the empty trays loaded with products;
 - tray supporting means provided in said first tray stock section and said second tray stock section respectively for supporting the trays;
- 10 lifting and lowering means for lifting and lowering said tray supporting means; and
- carrier means for carrying the loaded tray to said second tray stock section when the products are loaded on the empty tray existing in said first tray stock section,
- 15 said apparatus further comprising:
 - an outer wall constituting member covering at least side surfaces and upper surfaces of said first trays stock section and said second tray stock section to separate said first tray stock section and said second tray stock section from an external atmosphere;
 - 20 an opening provided at an upper portion of said first tray stock section, said opening allowing the products to be carried in therethrough;
 - an ionizer provided near said opening, said ionizer jetting ionized air to the products carried in through said opening, the products then being loaded on the empty tray; and
 - 25 an air cleaning means provided at an upper portion of said second tray stock section, said air cleaning means cleaning outside air and then

introducing the air into said second tray stock section.

2. The stocker apparatus according to claim 1, wherein said outer wall constituting member includes a frame, an elastically deformable sealing member abutting on the frame in a longitudinal direction thereof, a panel member abutting on the sealing member, and a pad member abutting on the panel member in a manner to cover an outer edge thereof and fixedly attached to the frame member to thereby elastically hold the panel member with the sealing member therebetween.

10

3. The stocker apparatus according to claim 1 or claim 2, wherein each of said lifting and lowering means has four annular belts for supporting each of said tray supporting means at four points, the annular belt being formed by superposing one end on another end of a straight belt having both the ends 15 and fixedly holding the ends by a both end fixing member, and the both end fixing member being located outside a winding round of the annular belt.

4. The stocker apparatus according to claim 3, wherein the straight belt is a straight toothed belt, and one end side or another end side of the straight 20 toothed belt is bent 180 degrees and then the one end side and the other end side are superposed and fixedly held by the both end fixing member.

5. A stocker apparatus comprising:
a first tray stock section capable of stocking a plurality of empty
25 trays;
a second tray stock section capable of stocking a plurality of loaded

trays, the loaded trays being the empty trays loaded with products;

tray supporting means provided in said first tray stock section and said second tray stock section respectively for supporting the trays;

lifting and lowering means for lifting and lowering said tray
5 supporting means; and

carrier means for carrying the loaded tray to said second tray stock section when the products are loaded on the empty tray existing in said first tray stock section,

said apparatus further comprising:

10 an outer wall constituting member covering at least side surfaces and upper surfaces of said first trays stock section and said second tray stock section to separate said first tray stock section and said second tray stock section from an external atmosphere;

an opening provided at an upper portion of said first tray stock section,
15 said opening allowing the products to be carried in therethrough; and

an ionizer provided near said opening, said ionizer jetting ionized air to the products carried in through said opening, the products then being loaded on the empty tray,

wherein said outer wall constituting member includes a frame, an
20 elastically deformable sealing member abutting on the frame in a longitudinal direction thereof, a panel member abutting on the sealing member, and a pad member abutting on the panel member in a manner to cover an outer edge thereof and fixedly attached to the frame member to thereby elastically hold the panel member with the sealing member therebetween.

25

6. A stocker apparatus comprising:

a first tray stock section capable of stocking a plurality of empty trays;

a second tray stock section capable of stocking a plurality of loaded trays, the loaded trays being the empty trays loaded with products;

5 tray supporting means provided in said first tray stock section and said second tray stock section respectively for supporting the trays;

lifting and lowering means for lifting and lowering said tray supporting means; and

carrier means for carrying the loaded tray to said second tray stock
10 section when the products are loaded on the empty tray existing in said first tray stock section,

said apparatus further comprising:

an outer wall constituting member covering at least side surfaces and upper surfaces of said first trays stock section and said second tray stock
15 section to separate said first tray stock section and said second tray stock section from an external atmosphere; and

an opening provided at an upper portion of said first tray stock section, said opening allowing the products to be carried in therethrough,

wherein each of said lifting and lowering means has four annular belts
20 for supporting each of said tray supporting means at four points, the annular belt being formed by superposing one end on another end of a straight belt having both the ends and fixedly holding the ends by a both end fixing member, and the both end fixing member being located outside a winding round of the annular belt, and

25 wherein the straight belt is a straight toothed belt, and one end side or another end side of the straight toothed belt is bent 180 degrees and then the

one end side and the other end side are superposed and fixedly held by the both end fixing member.